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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER


GRAHAM, CLEMENT B

ART UNIT	PAPER NUMBER
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3628

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

 Office Action Summary	Application No. 09/685,838	Applicant(s) MOORE ET AL.	
	Examiner Clement B Graham	Art Unit 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-33, remained pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-12, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, claims 1-12, do not recite any structure or functionality to suggest that a computer performs the recited claims. Thus, claims 1-12, are rejected as being directed to non-statutory subject matter.

Applicant's is advised to imbed a computer in the body of the claims.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-10 13-21, and 24-31, are rejected under 35 U.S.C. 102(b) as being anticipated by Graefe et al (Hereinafter Graefe U.S. Patent No. 5, 822, 747).

As per claim 1, Graefe discloses a computer-implemented method for solving a current optimization problem, comprising the steps of:

Storing ("i. e, database server") a plurality of data groups ("i. e, data structures") each associated with one of a plurality of anticipated optimization problems ("i. e, "input queries") (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45) each of the data groups including optimal solutions ("i. e, generating plan") to a corresponding anticipated optimization problem solving the current optimization problem using the stored data groups. (see column 4 lines 30-67 and column 5 lines 1-20).

As per claim 2, Graefe discloses further comprising the steps of pre-solving ("i. e, "generating solution to each sub-problem" see column 2 lines 30-55") the plurality of anticipated optimization problem ("i. e, "input queries") (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45) and compiling ("i. e, database server") the data groups("i. e, data structures") based on the results of pre-solving-step (see column 2 lines 41-55) (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20).

As per claim 3, Graefe discloses wherein the storing step stores("i. e, database server") the plurality of data groups("i. e, data structures") in database. (see column 4 lines 29-67).

As per claim 4, Graefe discloses wherein, each plurality groups further includes input values and intermediate calculation values associated with the corresponding anticipated optimization problems.(see column 19 lines 35-43).

As per claim , 5, Graefe discloses wherein further comprising the step of; preparing and storing a plurality of look up tables ("i. e , "database tables") for identifying each of the plurality of data groups. (see column 4 lines 15-29).

As per claim 6, Graefe discloses wherein, in preparing step the plurality of look up tables ("i. e , "database tables") (see column 4 lines 15-29) and plurality of optimization problems inputted ("i. e, "input queries") (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45) and

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objective values (see column 1 lines 23-33) and contain equation names RHS (right Hand Side) values.(see column 10 lines 58-67 and column 11 lines 1-14).

As per claim 7, Graefe discloses wherein solving step includes the steps of selecting at least one of the plurality of data groups using the look up tables and determining whether or not selected data group contains optimal solutions to the current problem. (see column 4 lines 5-67).

As per claim 8, Graefe discloses wherein the selecting step is implemented using user defined functions. (see column 4 lines 6-14).

As per claim 9, Graefe discloses wherein, if the determining step determines that the selected data group contains optimal solutions to the current problem (see column 1 lines 65-67) then the optimal solutions included in the selected data group are output as optimal solutions to the current problem. (see column 11 lines 25-33).

As per claim 10, Graefe discloses wherein, if the determining step determines that the selected data group does not contain optimal solutions to the current problem, then the selected data group is modified using a search method, and the current problem is iteratively solved using the modified data group to obtain optimal solutions to the current problem. (2 column lines 5-65).

As per claim 13, Graefe discloses a computer-implemented method for solving a current optimization problem, comprising the steps of:

Storing unit ("i. e, database server") for storing a plurality of data groups ("i. e, data structures") each of the data groups associated with one of a plurality of anticipated optimization problems ("i. e, "input queries") (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45) and including optimal solutions ("i. e, generating plan") to the associated anticipated optimization problem and an optimization unit for solving the current optimization problem using the stored data groups. (see column 4 lines 30-67 and column 5 lines 1-20).

As per claim 14, Graefe discloses wherein the optimization unit pre-solves ("i. e, "generating solution to each subproblem prior" see column 2 lines 30-55") the plurality of anticipated optimization problems("i. e, "input queries") (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45)

and compiles ("i. e, database server") the plurality of data groups ("i. e, data structures") based on the pre-solving (see column 2 lines 41-55") results. (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45).

As per claim 15, Graefe discloses, wherein each of the plurality of data groups further includes input values and intermediate calculation values pertaining to the associated anticipated optimization problem. (see column 19 lines 35-42 and column 3 line 65 and column 4 lines 5-35).

As per claim 16, Graefe discloses wherein the optimization unit prepares and stores a plurality of look up tables ("i. e , "database tables") in the storage unit for identifying each of the plurality of data groups. (see column 4 lines 15-29).

As per claim 17, Graefe discloses, wherein, in the preparing step. the plurality of look-up tables contain equation names, RHS (Right Hand Side) values, and objective values pertaining to the plurality of anticipated optimization problems.(see column 4 lines 10).

As per claim 18. Graefe discloses, wherein the optimization unit selects at least one of the plurality of data groups from the storage unit using the look-up tables, and determines whether or not the selected data group contains optimal solutions to the current problem. (see column 3 line 65 and column 4 lines 5-35).

As per claim 19, Graefe discloses The system of claim 18, wherein the optimization unit employs user-defined functions to select the at least one of the plurality of data groups from the storage unit.(see column 8 lines 30-40).

As per claim 20, Graefe discloses, wherein, if the optimization unit determines that the selected data group contains optimal solutions to the current problem, then the optimization unit outputs the optimal solutions included in the selected data group as optimal solutions to the current problem. (Note abstract and see column 1 line 65 and column 4 lines 5-65 and 5 lines 5-20).

As per claim 21, Graefe discloses, wherein, if the optimization unit determines that the selected data group does not contain optimal solutions to the current problem, then the optimization unit modifies the selected data group using a search method and

iteratively solves the current problem using the modified data group to obtain optimal solutions to the current problem. (Note abstract and see column 1 line 65 and column 4 lines 5-65 and 5 lines 5-20).

As per claim 24, Graefe discloses a Computer readable code stored on media, for solving an optimization problem("i. e, input queries") comprising:
a first subprocesses for storing unit (i. e, database") for storing a plurality of data groups ("i. e, data structures") each of the data groups associated with one of a plurality of anticipated optimization problems (Note abstract and see column 1 line 65 and column 4 lines 5-65 and 5 lines 5-20) and (see column 40 line 45) including optimal solutions("i. e, generating plan") to the associated anticipated optimization problem and second subprocesses for solving the current optimization problem using the plurality of data groups. (see column 4 lines 30-67 and column 5 lines 1-20).

As per claim 25, Graefe discloses further comprising third sub-processes for pre-solving ("i. e, "generating solution to each subproblem" see column 2 lines 30-55") the plurality of anticipated optimization problems ("i. e, "input queries") (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45) and fourth sub-process for compiling the plurality of data groups based on outputs from the third sub-processes. (see column 2 lines 30-55).

As per claim 26, Graefe discloses, wherein each of the plurality of data groups further includes input values and intermediate calculation values associated with the corresponding anticipated optimization problem.(see column 4 lines 10).

As per claim 27, Graefe discloses the code of claim 24, further comprising:
fifth subprocesses for preparing a plurality of look-up tables for identifying each of the plurality of data groups, wherein the plurality of look-up tables contain equation names, RHS (Right Hand Side) values, and objective values pertaining to the plurality of anticipated optimization problems.(see column 3 line 65 and column 4 lines 5-35).

As per claim 28, Graefe discloses, wherein the second subprocesses select at least one of the plurality of data groups using the look-up tables, and determine whether or not the selected data group contains optimal solutions to the current problem. (see column 3 line 65 and column 4 lines 5-35).

As per claim 29, Graefe discloses, wherein the second subprocesses select the at least one of the plurality of data groups using user-defined functions.(see column 8 lines 25-40).

As per claim 30, Graefe, discloses wherein, if it is determined that the selected data group contains optimal solutions to the current problem, then the second subprocesses output the optimal solutions included in the selected data group as optimal solutions to the current problem. (Note abstract and see column 1 line 65 and column 4 lines 5-65 and 5 lines 5-20).

As per claim 31, Graefe discloses, wherein, if it is determined that the selected data group does not contain optimal solutions to the current problem, then the second subprocesses modify the selected data group using a search method and iteratively solve the current problem using the modified data group to obtain optimal solutions to the current problem(Note abstract and see column 1 line 65 and column 4 lines 5-65 and 5 lines 5-20).

5. Claims 11-12, 22-23, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graefe et al (Hereinafter Graefe U.S. Patent No. 5, 822, 747 in view of view of Hausman et al(Hereinafter Hausman U.S. Patent No. 6, 086, 619.

As per claim 11, Graefe discloses in the solving step, the current problem is a portfolio optimization problem. (see column 4 lines 30-67 and column 5 lines 1-20). Graefe fail to explicitly teach financial.

However Hausman discloses the QUADCOSTS construct allows the modeler to specify quadratic cost elements or bilinear cost elements which are proportional to the product of two (possibly non-unique) specified flows. Use of this capability allows representation of risk adjusted return optimization problems, e.g., portfolio optimization subject to linear constraints. Other example QUADCOST uses include production problems where unit price decreases linearly with the quantity produced, production problems where unit price decreases or remains constant with increases in production of other products (substitutability among products), production problems where unit cost of an input resource decreases linearly as the quantity of the resource is increased; etc.(see column 10 lines 46-58).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Graefe to include financial taught by Hausman in order to perform optimization on a financial portfolio.

As per claim 12, Graefe discloses wherein, in the solving step, the current problem is an optimization problem (see column 4 lines 30-67 and column 5 lines 1-20). Graefe fail to explicitly teach requiring the use of quadratic, linear or integer optimization algorithms.

However Hausman discloses Netcore is a method, implemented in software, for efficiently expressing optimization problems which can be solved with network, linear, integer, mixed integer linear, and quadratic programming techniques. Every Netcore representation of a problem may include a network, linear, integer, mixed integer, or mixed integer linear programming problem where each integer variable has a finite number of possible values and with optional quadratic and bilinear terms in the objective function (hereinafter collectively referred to as MILPQ programs); it can also be proven rigorously that every MILPQ program can be expressed in Netcore. The Netcore representation uses directed graphs and associated data with certain numeric fields for the nodes and links, and a few simple but powerful constraint mechanisms.(see column 4 lines 2-65).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Graefe to include requiring the use of quadratic linear or integer optimization algorithms taught by Hausman in order to solve problems that may be characterized as including network programs, linear programs, integer programs and mixed integer linear programs, all of which may have optional quadratic or bilinear terms in the objective functions.

As per claim 22, Graefe discloses in the solving step, the current problem is a portfolio optimization problem. (see column 4 lines 30-67 and column 5 lines 1-20). Graefe fail to explicitly teach financial.

However Hausman discloses the QUADCOSTS construct allows the modeler to specify quadratic cost elements or bilinear cost elements which are proportional to the product of two (possibly non-unique) specified flows. Use of this capability allows

representation of risk adjusted return optimization problems, e.g., portfolio optimization subject to linear constraints. Other example QUADCOST uses include production problems where unit price decreases linearly with the quantity produced, production problems where unit price decreases or remains constant with increases in production of other products (substitutability among products), production problems where unit cost of an input resource decreases linearly as the quantity of the resource is increased; etc.(see column 10 lines 46-58).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Graefe to include financial taught by Hausman in order to perform optimization on a financial portfolio.

As per claim 23, Graefe discloses wherein, in the solving step, the current problem is an optimization problem (see column 4 lines 30-67 and column 5 lines 1-20). Graefe fail to explicitly teach requiring the use of quadratic, linear or integer optimization algorithms.

However Hausman discloses Netcore is a method, implemented in software, for efficiently expressing optimization problems which can be solved with network, linear, integer, mixed integer linear, and quadratic programming techniques. Every Netcore representation of a problem may include a network, linear, integer, mixed integer, or mixed integer linear programming problem where each integer variable has a finite number of possible values and with optional quadratic and bilinear terms in the objective function (hereinafter collectively referred to as MILPQ programs); it can also be proven rigorously that every MILPQ program can be expressed in Netcore. The Netcore representation uses directed graphs and associated data with certain numeric fields for the nodes and links, and a few simple but powerful constraint mechanisms.(see column 4 lines 2-65).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Graefe to include requiring the use of quadratic linear or integer optimization algorithms taught by Hausman in order to solve problems that may be characterized as including network programs, linear programs,

integer programs and mixed integer linear programs, all of which may have optional quadratic or bilinear terms in the objective functions.

As per claim 32, Graefe discloses in the solving step, the current problem is a portfolio optimization problem. (see column 4 lines 30-67 and column 5 lines 1-20). Graefe fail to explicitly teach financial.

However Hausman discloses the QUADCOSTS construct allows the modeler to specify quadratic cost elements or bilinear cost elements which are proportional to the product of two (possibly non-unique) specified flows. Use of this capability allows representation of risk adjusted return optimization problems, e.g., portfolio optimization subject to linear constraints. Other example QUADCOST uses include production problems where unit price decreases linearly with the quantity produced, production problems where unit price decreases or remains constant with increases in production of other products (substitutability among products), production problems where unit cost of an input resource decreases linearly as the quantity of the resource is increased; etc.(see column 10 lines 46-58).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Graefe to include financial taught by Hausman in order to perform optimization on a financial portfolio.

As per claim 33, Graefe discloses wherein, in the solving step, the current problem is an optimization problem (see column 4 lines 30-67 and column 5 lines 1-20). Graefe fail to explicitly teach requiring the use of quadratic, linear or integer optimization algorithms.

However Hausman discloses Netcore is a method, implemented in software, for efficiently expressing optimization problems which can be solved with network, linear, integer, mixed integer linear, and quadratic programming techniques. Every Netcore representation of a problem may include a network, linear, integer, mixed integer, or mixed integer linear programming problem where each integer variable has a finite number of possible values and with optional quadratic and bilinear terms in the objective function (hereinafter collectively referred to as MILPQ programs); it can also be proven rigorously that every MILPQ program can be expressed in Netcore. The Netcore

representation uses directed graphs and associated data with certain numeric fields for the nodes and links, and a few simple but powerful constraint mechanisms.(see column 4 lines 2-65).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Graefe to include requiring the use of quadratic linear or integer optimization algorithms taught by Hausman in order to solve problems that may be characterized as including network programs, linear programs, integer programs and mixed integer linear programs, all of which may have optional quadratic or bilinear terms in the objective functions.

Conclusion

RESPONSE TO ARGUMENTS

6. Applicant's arguments files on 08/09/2004 have been fully considered but they moot in view of new grounds of rejections.

7. In response to applicant's arguments regarding Graefe and Hausman.

8. In response to Applicant's arguments that that Graefe and Hausman fail to teach storage of a plurality of data groups whereby the data include optimal solutions to corresponding anticipated optimization problems and solving a current optimization problem using the stored data group" first the Examiner apologize for his oversight and miscitation of the columns in the Graefe reference.

However these limitations are taught by Graefe as it states, Storing ("i. e, database server") a plurality of data groups ("i. e, data structures") each associated with one of a plurality of anticipated optimization problems ("i. e, "input queries") (Note abstract and see column 1 line 65 and column 4 lines 1-65 and 5 lines 1-20) and (see column 40 line 45) each of the data groups including optimal solutions ("i. e, generating plan") to a corresponding anticipated optimization problem solving the current optimization problem using the stored data groups. see column 4 lines 30-67 and column 5 lines 1-20.

Further Applicant's responsible for reading the supplied reference in its entirety.

Hausman discloses the QUADCOSTS construct allows the modeler to specify quadratic cost elements or bilinear cost elements which are proportional to the product of two (possibly non-unique) specified flows. Use of this capability allows

representation of risk adjusted return optimization problems, e.g., portfolio optimization subject to linear constraints. Other example QUADCOST uses include production problems where unit price decreases linearly with the quantity produced, production problems where unit price decreases or remains constant with increases in production of other products (substitutability among products), production problems where unit cost of an input resource decreases linearly as the quantity of the resource is increased; etc. see column 10 lines 46-58.

It is clear to one of ordinary skill in the art that storage of a plurality of data groups whereby the data include optimal solutions to corresponding anticipated optimization problems and solving a current optimization problem using the stored data group was taught within the applied references.

9. In response to Applicant's arguments that Graefe fail to teach or suggest "pre calculation of any kind" the Examiner disagrees with Applicant's because Graefe discloses calculating values. see column 19 lines 35-43, therefore it is clear that the prior art of reference teaches pre-calculations.

10. In response to Applicant's arguments that the examiner has fail to meet the requirements of prima facie case of obviousness

Examiner respectfully submits that obviousness is not determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See *In re Oetiker*, 977 F. 2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ* 685, 686 (Fed. Cir.1992); *In re Piaseckii*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir.1984); *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Using this standard, the Examiner respectfully submits that he has at least satisfied the burden of presenting a prima facie case of obviousness, since he has presented evidence of corresponding claim elements in the prior art and has expressly articulated the combinations and the motivations for combinations that fairly suggest Applicant's claimed invention (See paper number 10). Note, for example, in the instant case, the Examiner respectfully notes that each and every motivation to combine the applied references are accompanied by select portions of the respective reference(s) which specially support that particular

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motivation and /or an explanation based on the logic and scientific reasoning of one ordinarily skilled in the art at the time of the invention that support a holding of obviousness. As such, it is not seen that the Examiner's combination of references is unsupported by the applied prior art of record. Rather, it is respectfully submitted that explanation based on the logic and scientific reasoning of one of ordinarily skilled in the art at the time of the invention that support a holding of obviousness has been adequately provided by the motivations and reasons indicated by the Examiner, Ex pane Levengood, 28 USPQ2d 1300(Bd. Pat. App &,4/293 Therefore the combination of reference is proper and the rejection is maintained.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clement B Graham whose telephone number is 703-305-1874. The examiner can normally be reached on 7am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 703-308-0505. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-0040 for regular communications and 703-305-0040 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CG

January 12, 2005


HYUNG SOUGH
SUPERVISOR
TECHNOLOGY CENTER 3628